

Notice of Allowability

Application No.

10/696,944

Examiner

Sherry L Estremsky

Applicant(s)

MUELLER ET AL.

Art Unit

3681

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the application filed 10-30-03.
2. ☒ The allowed claim(s) is/are 1-32.
3. ☒ The drawings filed on 30 October 2003 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
 - * Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08),
 Paper No./Mail Date 12-22-03, 12-20-04
4. ☐ Examiner's Comment Regarding Requirement for Deposit
 of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413),
 Paper No./Mail Date _____.
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

DETAILED ACTION

Allowable Subject Matter

1. Claims 1-32 are allowed.
2. The following is an examiner's statement of reasons for allowance:

No reference nor combination of references was found which teaches a power transfer assembly or transfer case for use in a vehicle having a powertrain and first and second drivelines, including a range clutch or sleeve, a range shift mechanism, a friction clutch disposed between first and second output shafts, a driveshaft of a motor having a gear to drive a rotary member (first member or rotary sector member), an axially moveable member (second member or non-rotary cam member) to engage and disengage the friction clutch, and a member for converting rotation (third member or rotary drive member) of the rotary member to axial movement of the axially moveable member, wherein the member for converting rotation includes means for coordinating movement of the axially moveable member with movement of the range clutch, as required by claims 1 and 21, or the member for converting rotation includes means for permitting relative rotation between itself and the rotary member so the driveshaft moves the range sleeve without movement of the axially moveable member, as required by claims 13 and 29.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U. S. Patent 6,802,794 (Showalter) October 2004 - discloses a four wheel drive transfer case with a reduction unit having a range clutch sleeve, an interaxle differential, and a friction clutch between the two output shafts. An electric motor actuates both the range clutch and the friction clutch. The friction clutch is actuated through axial movement of an axially moveable member, with a member converting rotation of a rotary member driven by a gear on the motor's driveshaft to the axial movement. Movement of the range clutch relative to the axially moveable member is coordinated or permitted by a pin on the driveshaft engaging a groove in the gear on the driveshaft, the gear being rotatably mounted on the driveshaft.

U. S. Patent 6,808,037 (Mueller) October 2004 - discloses a transfer clutch actuator similar to that of the current invention, but without relation to a range clutch.

U. S. Patent 6,827,663 (Tucker-Peake) December 2004 - discloses a friction clutch actuator using an electric motor, gear set, rotary member, rotary to axial motion conversion member, and axially moving member to actuate the clutch.

U. S. Patent Application Publication 2002/0142877 (Williams et al.) October 2002 - discloses a transfer case similar to that of the current invention, but the member for converting rotation to axial movement does not include means to influence the relationship between movement of the range clutch and movement of the axially moveable member.


4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sherry L Estremsky whose telephone number is (703) 308-2164. The examiner can normally be reached on Tuesday and Friday from 7:30 a.m. to 6:00 p.m.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles Marmor can be reached on (703) 308-0830. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

SLE


SHERRY ESTREMSKY
PRIMARY EXAMINER
AU3681 2-4-05